

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Tomii et al. (US 4,703,231).

Regarding claim 1, Tomii discloses an electrostatic deflection system in figure 5 for deflecting an electron beam (not labeled), comprising: first deflection electrodes (item 43) for electrostatically deflecting the electron beam in a first direction; second deflection electrodes (item 44) for electrostatically deflecting the electron beam in a second direction perpendicular to the first direction, and a focus electrode (item 47), cooperating with at least the first deflection electrodes, for establishing, in operation, a focusing electron lens field (area in middle) between the focus electrode and the first deflection electrodes, said focusing electron lens field focusing the electron beam in at least the first direction (see FIG. 5).

Regarding claim 2, Tomii discloses the electrostatic deflection system as claimed in claim 1, wherein the focus electrode cooperates with both the first and the second deflection electrodes, for focusing the electron beam in both the first and the second directions (see FIG. 5).

Regarding claim 3, Tomii discloses the electrostatic deflection system as claimed in claim 1, wherein, when seen in a direction of travel of the electron beam, the focus electrode is arranged closest to an electron source (item 40), and the first and second deflection electrodes are positioned behind the focus electrode (see FIG. 5).

Regarding claim 4, Tomii discloses the electrostatic deflection system as claimed in claim 1, wherein, when seen in a direction of travel of the electron beam, one of the first and the second deflection electrodes is arranged closest to an electron source (item 40), and the focus electrode is positioned behind both the first and the second deflection electrodes (see FIG. 5).

Regarding claim 6, Tomii discloses the electrostatic deflection system as claimed in claim 1, wherein the focus electrode is provided with an aperture having an elliptical shape (see FIG. 5).

Regarding claim 7, Tomii discloses a matrix display device in figure 5 comprising: an electron source (item 40) for generating an electron beam (not labeled); a display screen (item 52) with a plurality of picture elements, said display screen being supplied with an anode voltage and being arranged for receiving said electron beam (column 6, lines 25-27), the electron beam being associated with a portion of said display screen (see FIG. 5) comprising a predetermined number of the picture elements, wherein the electron beam is deflectable by means of an electrostatic deflection system as specified in claim 1, for scanning the electron beam over the

associated portion of the display screen, the electron beam being focused on the display screen by means of the focusing electron lens (see FIG. 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomii et al. (US 4,703,231).

Regarding claim 5, Tomii discloses the electrostatic deflection system as claimed in claim 1, but does not expressly disclose that the first and second deflector electrodes are each arranged for receiving a static deflector voltage and a dynamic deflection voltage, said dynamic deflection voltage being at most 10% of said static deflector voltage, as claimed by Applicant. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the first and second deflector electrodes are each arranged for receiving a static deflector voltage and a dynamic deflection voltage, said dynamic deflection voltage being at most 10% of said static deflector voltage, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Regarding claim 8, Tomii discloses the matrix display as claimed in claim 7, but does not expressly disclose that the focus electrode, the first deflector electrodes and the second deflector

electrodes are arranged for receiving at least a static voltage, the static voltage for one of said electrodes being positioned closest to the display screen being at least 50% of the anode voltage, as claimed by Applicant. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the focus electrode, the first deflector electrodes and the second deflector electrodes are arranged for receiving at least a static voltage, the static voltage for one of said electrodes being positioned closest to the display screen being at least 50% of the anode voltage, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Regarding claim 9, Tomii discloses the matrix display as claimed in claim 8, but does not expressly disclose that the smallest of said static voltages is at least 10% of the anode voltage, as claimed by Applicant. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the smallest of said static voltages is at least 10% of the anode voltage, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie K. Walford whose telephone number is (571)-272-6012. The examiner can normally be reached on Monday-Friday, 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571)-272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Art Unit: 2879

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

nkW
/Natalie K Walford/
Examiner, Art Unit 2879

/Sikha Roy/
Primary Examiner, Art Unit 2879